MoDNR site file photos.

Result from Mill St. transect. MoDNR site file photo.

Solid State Circuits Inc. Site

Missouri Department of Natural Resources

P.O. Box 176, Jefferson City, MO 65102-0176

April 2024

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

The mission of the Missouri Department of Natural Resources is to protect our air, land, water, and mineral resources; preserve our unique natural and historic places; and provide recreational and learning opportunities, while promoting the environmentally sound and energy-efficient operations of businesses, communities, agriculture, and industry for the benefit of all Missourians.

Solid State Circuits Site Community Involvement Plan

The Missouri Department of Natural Resources developed this community involvement plan (CIP) to facilitate two-way communication between the community surrounding the Solid State Circuits Inc. site and the department, and to encourage community involvement in site cleanup decisions. The CIP will help the department plan how to effectively communicate with the community and provide opportunities for public participation that will meet community needs and occur as specific milestones related to the ongoing environmental investigation and cleanup for the site are reached.

The site is located at the southeast corner of Elm and Main streets, in old downtown, Republic. The department will utilize the community involvement activities outlined in this CIP to ensure residents remain informed and are provided with opportunities to be involved in important site cleanup decisions.

This CIP provides a history and background of the site and community; presents an analysis of community issues and concerns; details a communications action plan and summarizes cleanup activities and the department's community involvement program.

The department utilized several sources of information to develop this CIP, including community interviews and site files. The department's Superfund section will oversee the implementation of the community involvement activities outlined in this plan. Site cleanup and community involvement activities will follow a process for cleaning up contaminated sites; the process is outlined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund.

Primary Points of Contact for the Solid State Circuits Inc. Site are:

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Environmental Project Supervisor
Remedial Project Management Unit
Environmental Remediation Program - Superfund Section
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MoDNR site file photo

In This Plan

Updates to the Plan

According to recent community interview responses, environmental investigations and findings at the site continue to be a concern to the community. The department recognizes the importance of keeping the community informed, therefore, this CIP will be updated as needed to ensure community concerns continue to be addressed.

Introduction

Community Involvement at the Solid State Circuits Site

Community involvement is the practice of informing and involving the public in the cleanup process by engaging in dialogue and collaboration with community members who may be affected by site contamination. The department's community involvement efforts begin by establishing early and meaningful communication with communities through an exchange of information. This community involvement plan (CIP) for the Solid State Circuits (SSC) site is designed to ensure that the community is informed about opportunities for public participation that will occur as specific milestones related to the ongoing environmental investigation and cleanup for the site occur. The site's action plan, which is a list of community involvement activities that will be implemented and when they will be used to inform and involve the community in site cleanup decisions, will assist the project team in establishing effective communication with the local community.

The department is committed to providing ample and diverse opportunities for nearby residents, interested citizens, employees and other stakeholders to get information and voice their views and opinions about the site's environmental cleanup activities. Recognizing that people prefer to receive information in different ways and have varying levels of interest in the site, this CIP describes what the Missouri Remedial Action Corpporation Inc. (MRAC), an entity formed following a series of corporate successions and acquisitions by SSC, and the department, have done, and will do according to community preferences and concerns, to inform and communicate with the community and to address their concerns.

During the creation of this CIP, department staff conducted research and community interviews with residents and stakeholders who represent the community. As part of this process, staff provided information to the community and responded to questions. The department will use community feedback contained in this CIP to continue to provide information to the community, address concerns and answer questions raised by the community as work at the site progresses.

Since it is a living document, this CIP will be reviewed and updated as needed to reflect community preferences, environmental milestones and activities at the site. The department and MRAC plan to keep residents and interested stakeholders informed and involved through a variety of communication methods and site activities, which are listed in the site's action plan and could include public meetings, site sheets, community group presentations and updates during active environmental investigations and cleanup resulting from these investigations.

In order to keep the community informed about site activities and decisions, it is important that information is made available for access and review. For this reason, an information repository of site-related documents has been established at the department's Elm St. building location. The Elm St. repository contact information, such as the hours of operation, address and phone number can be found on page 12 of this CIP. Current site documents are also posted on the department's site webpage at dnr.mo.gov/waste-recycling/sites-regulated-facilities/superfund/interest/solid-state-circuits-inc or on the department's website in the document search feature at dnr.mo.gov/document-search, and on EPA's website at cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0701392. Additionaly, electronic file information can be requested by filing a Sunshine Law Request with the department.

Site History and Maps

MoDNR site file photo.

Site Description

The Solid State Circuits (SSC) site is a former printed circuit board manufacturing facility site that operated in the northern portion of a grain mill building at the southeast corner of Elm and Main Streets, in the old downtown portion of Republic between 1968 and 1973. As part of the manufacturing process, SSC used trichloroethlyene (TCE) as a cleaning solvent. TCE was stored and used in the building's basement. A TCE release from the facility into the environment created a TCE groundwater contaminant plume. The SSC site is less than one acre in size and is enclosed within a six-foot high chain link fence.

The original plant building and basement were constructed before 1902. The building's northern portion was four stories tall, the rest was one story. After SSC moved from the property, a photographic-processing firm operated on-site from 1973 until 1979, when the northern portion burned. The burned portion was demolished, the debris was pushed into the basement; the basement was filled-in to grade. The property remains undeveloped.

In 1982, the Missouri Department of Natural Resources conducted public drinking water sampling as part of the Environmental Protection Agency's National Synthetic Organic Chemical Survey. Sampling results detected TCE in City Well #1, located 600 feet south of the SSC facility; the city immediately took the well out of public use. A subsequent investigation conducted by SSC identified the facility as the source of TCE contamination in the well. There has been no detection of TCE in any of Republic's other public or private wells.

The Missouri Remedial Action Corporation Inc. (MRAC), an entity formed following a series of corporate successions and acquisitions by SSC, is performing the site investigation and cleanup. In June 1986, EPA placed the SSC site on the National Priorities List. Since then, the Department has overseen site investigation and cleanup actions conducted by MRAC.

Description of Contamination

The primary contaminants of concern at the SSC site are TCE and related chemicals that form when TCE breaks down in the environment. Exposure to TCE has been associated with a number of adverse health effects. Additional information about the health effects of TCE exposure is available through the Agency for Toxic Substances and Disease Registry's fact sheet: atsdr.cdc.gov/toxfaqs/tfacts19.pdf.

The exact volume of TCE released, and how the releases occurred at the site is not known; however, sampling data indicate that TCE entered the subsurface at the facility through sumps and floor drains located in the building's basement. After traveling vertically through 10-15 feet of clay soil, TCE traveled horizontally within the upper portion of the bedrock surface, through fractures and karst geologic features that are common to southwest Missouri, such as underground openings, losing streams, and springs.

It is believed that an old well with a deteriorated casing in the building's basement allowed TCE to travel vertically several hundred feet into the deeper drinking water aquifer where City Well #1 pulled it in. EPA plugged this basement well shortly after discovering it in 1985.

In the 1980s, EPA detected TCE contamination in soil next to the facility. In 2010, MRAC discovered additional TCE contamination in the area. Additionally, MRAC detected TCE in soil along subsurface sewer lines south of the facility, where presumably it moved out of the sewer through gaps in pipe seams and broken portions of the aging clay tile sewer pipe. TCE vapors from the soil contamination are presumably entering the sewer, leading to concerns about TCE vapors getting into buildings connected to the sewer south of the former facility. The Department and MRAC believe that TCE was discharged to the sewer when the facility was active.

From 2007 to present, MRAC has conducted several sampling efforts to evaluate the potential for TCE vapors to travel through the subsurface and enter overlying structures, a process known as vapor intrusion (VI). TCE vapors can enter structures at the site in two ways: by traveling within soil gas beneath building foundations or crawlspaces, then entering through utility accesses, sumps, floor drains, foundation cracks, and seams; or by travelling through sewers, then entering through poorly sealed plumbing connections.

Between 2018 and present, MRAC implemented several vapor-reduction measures at the only residence where TCE was detected, to try to minimize potential health impacts on residents. These measures included installing equipment to purify air inside the building and remove vapors from beneath the building. In November 2020, MRAC conducted a smoke test at the residence, which showed sewer vapors were entering the basement through a faulty plumbing connection. In December 2020, MRAC repaired the home's plumbing. Follow-up smoke testing and indoor air testing showed that the connection had been successfully sealed and was preventing further sewer vapor infiltration into the residence. In March 2022, MRAC conducted additional indoor air sampling at this residence to assess the effectiveness of these measures.

Investigation and Cleanup Activities

As shown in the site map on page 8, the site is organized into four areas: Area 1 is the parcel where SSC operated; Area 2 includes the Main Street corridor between Area 1 and the former location of City Well #1; Area 3 includes the area around former City Well #1; and L-shaped Area 4 extends farther south along the Main Street corridor before extending east along Brooks Street. Following is a summary of site-related investigations and other actions:

- *Soil Investigations*: Between 1985 and 2018, MRAC collected and analyzed more than 400 soil samples from multiple boring locations and multiple depths, in all four areas. Results showed the highest TCE levels were in the soil directly beneath the former manufacturing building and in several locations near underground sewer lines to the south, along Main Street.

- *Soil Cleanup*: In 1985, EPA excavated more than 2,000 cubic yards of contaminated soil and building debris from the facility's basement and the surrounding area, and transported it off-site for disposal at an approved facility. In 2012, MRAC treated approximately 2,500 cubic yards of contaminated soil in Area 1 by physically mixing the soil in place with a substance designed to reduce TCE. In 2015, MRAC treated approximately 6,000 cubic yards of contaminated soil in Areas 2 and 3 by injecting substances into the soil to reduce TCE and its breakdown chemicals. In 2020, MRAC treated an additional 2,900 cubic yards of soil in Area 1 by injecting a combination of treatment substances into the subsurface to further reduce TCE and its breakdown chemicals. In 2021 and 2022, MRAC conducted soil and shallow groundwater sampling in Areas 1, 2, and 3 to evaluate the effectiveness of the 2015 and 2020 subsurface injections.

- *Groundwater Investigations*: To date, EPA and MRAC have installed more than 50 groundwater monitoring wells at the site, as shown in the attached map. Regular well sampling has identified TCE and its breakdown chemicals in groundwater extending south of the former facility, primarily along the Main Street corridor to U.S. Highway 60. MRAC plans to install additional groundwater monitoring wells in 2022 to further define the impacted groundwater's boundaries.

- *Groundwater Cleanup*: In 1993, MRAC installed a groundwater recovery and treatment system. The system consisted of six groundwater extraction wells, four of which were within Area 1 and two were between Area 1 and U.S. Highway 60. The system stripped TCE from extracted groundwater before discharging it to the sewer. However, the system's effectiveness dropped significantly after the initial 10-15 years of operation. Since a 2011 fire destroyed the treatment system, MRAC has conducted groundwater extraction only at the southernmost extraction well, located near U.S. Highway 60. TCE levels in the recovered groundwater from that location are low enough to allow direct discharge of untreated recovered groundwater directly to the sewer.

  In 2015, MRAC also treated contaminated groundwater in Areas 2 and 3 by injecting substances into the subsurface to degrade TCE and its breakdown chemicals. In 2020, MRAC treated groundwater in Area 1 by injecting a combination of treatment substances to reduce TCE and its breakdown chemicals. Continued monitoring reported in January 2021, shows a decrease of TCE below method detection limits.

  MRAC routinely (twice per year) samples groundwater in Areas 1, 2, and 3 to assess the effectiveness of the 2015 and 2020 treatments in those areas. Additionally, following installation and testing of additional monitoring wells in 2024, MRAC will assess conditions and evaluate potential remedies for addressing remaining TCE contamination in groundwater.

- *Vapor Intrusion Investigation*: TCE vapors have been detected in sewer mains and shallow soil adjacent to subsurface utilities along the Main Street corridor and east along Brooks Street. In 2021, based on proximity to these source areas, MRAC and the Department identified 28 properties to consider for additional VI sampling. In 2017, MRAC and the Department identified eight properties for VI sampling. MRAC requested access to the eight properties to conduct VI sampling; property owners granted access to three of them. Of the three properties sampled, TCE was detected above the health-based screening level in one residential building with a basement foundation.

  In December 2020, MRAC conducted additional sewer vapor sampling at manhole locations along Main, Mill, and Brooks streets to define the extent of sewer gas impacts. In 2021, MRAC repeated sampling at those same locations during warm weather conditions. Based on those findings, and proximity to the source areas, MRAC and the department identified 28 properties to consider for additional VI sampling.

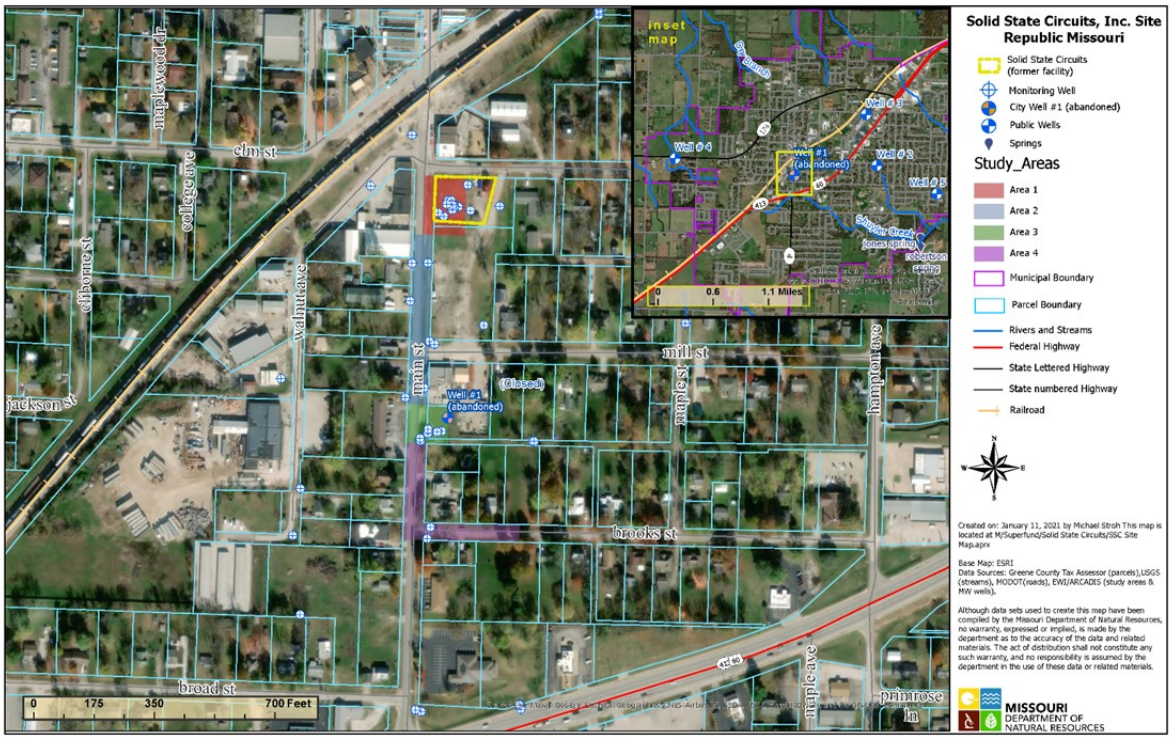
  To further assess sanitary sewer conditions and map sewer lateral locations, a video survey of the sanitary sewer was completed. The survey showed a need to repair portions of the sewer. In November 2021, MRAC installed cured-in-place piping (CIPP) along the sewer main at Main Street from Elm Street to Brooks Street. A small section of CIPP, about 400 ft. in length, was also installed along Brooks Street. The CIPP was

to prevent further TCE migration from the sewers into the surrounding buildings.

In the winter of 2021, the Department increased communication and education efforts to expand public awareness of potential health concerns associated with exposure to TCE contamination. The Department assisted MRAC in gaining access to other potentially affected properties to conduct VI sampling. The sampling was conducted March 2022, in order to clearly define the extent of TCE contamination from the site and to identify potential exposures to TCE above heath-based levels.

Street view photos courtesy of Google Maps.

Solid State Circuits Site Map



Solid State Circuits Inc. Site Activity Timeline

2016

Aug. 30, supplemental data collection work plan submitted to MoDNR; Sept. 30, fifth 5-year review report submitted to MoDNR; October-November, supplemental data collection activities.

2017

Aug. 18, vapor intrusion investigation work plan submitted to MoDNR; Aug. 31, force majeure/ excusable delay (FM/ED) agreement amended; Sept. 14, vapor intrusion investigation work plan addendum 1 submitted to MoDNR; September - November, sub-slab and soil gas sampling; November, supplemental soil sampling.

2018

January - February, indoor air sampling activities; Jan. 26, vapor intrusion investigation work plan addendum 2 submitted to MoDNR; February, Area 4 soil sampling activities conducted; March 31, FM/ED agreement amended; August, October, December - indoor air sampling.

2019

January, March, indoor air sampling activities; April, Evaluation of Area 1 remedial alternatives submitted to MoDNR; June 26, project meeting to discuss Area 1 remedial alternatives; June 30, FM/ ED agreement amended.

2020

May 28, project meeting to discuss vapor intrusion investigation; June, sanitary sewer water and air sampling activities; June 30, FM/ED agreement amended; June - July, final Area 1 pilot program work plan submitted and injection activities; July 17, draft focused feasibility study work plan submitted to MoDNR; Oct. 5, sanitary sewer sampling scope submitted; Dec. 15, sanitary sewer sampling scope addendum submitted.

2021

Sept. 27, the department held a public meeting/public availability session to provide information to the community on the potential for vapor intrusion resulting from contaminants released into the environment from the Solid State Circuits site. Oct. 13 and 14, the department conducted community outreach to obtain permission to sample homes and buildings for vapor intrusion.

2022

The department and EPA completed the sixth 5-year review. Indoor air and sewer sampling activities were performed in August. Groundwater sampling for the site was performed in April and November 2022.

2023

Groundwater sampling activities were performed in April 2023 and October 2023. A geophysics study was completed in April 2023 to determine where to install an additional well.

Community Feedback

The Missouri Department of Natural Resources encourages the community to get involved as we oversee site characterization and cleanup of the Solid State Circuits site.

Community Members Provide Feedback to Enhance Community Involvement

Missouri Department of Natural Resources staff surveyed community members, residents, business owners and leaders to find communication strategies that work best for the community and to survey community concerns regarding the Solid State Circuits site and site cleanup. Community responses are summarized below, and will strengthen future communications between the community and the department.

Community interviews were conducted on Oct. 11 and 12, 2023. Interviewees were selected based upon their proximity to and involvement with the site(s), as well as interest in the site(s). Department staff interviewed 11 community members representing the community located just south of the Solid State Circuits site, and received four more completed questionnaires afterwards. Each interview consisted of 16 questions (Appendix E). Some interviewees were underinformed of investigations and cleanup being conducted at the site. During community interviews, department staff took the opportunity to provide interviewees with site background, contaminant, and cleanup information and answered questions.

What People Understand About the Site

One respondent summed it up for a lot of respondents when they stated they knew “next to nothing” about the environmental investigation and cleanup activities being conducted at and near the site. Half of the respondents seemed to know the site existed, some knew the most basic information (contaminant was released to soil and groundwater), some had misperceptions that were corrected during interveiws. Where there were gaps in understanding, we provided information. A couple of respondents told us that they only knew about the site because of our previous visits to the neighborhood where we visited with residents in efforts to obtain vapor intrusion sampling. Others indicated signage at the site informed them of hazardous substances located there. One mail-in respondent said they had always known about the site.

Where People get Information About the Site

Respondents indicated that signs placed on the site were helpful in informing about the presence of site contamination. They also stated that information was provided to them by department staff while on site visits. Otherwise, local residents are not receiving regular site updates.

Community Interest in the Site

Ten out of 15, or roughly 66.6% of respondents chose options 1 and 2, "least or less likely to attend" a future public meeting. Five, or 33.3% of respondents chose either option 4 or 5, indicating the most interest in attending a future public meeting. Some said if there was a matter of great concern, or if there was a virtual option or if they owned instead of rented, their interest level would rise.

Community Concerns About the Site

Community concerns about the site ranged from health concerns due to having children, gardens and possible long-term contaminant exposure, to concerns related to potential effects on property value and whether people should stay in the community or sell. Some people reported that they didn't have concerns, but that our presence in the community made them feel as though perhaps they should. We assured respondents that we were conducting routine interviews for the benefit of the community and their communications needs. The majority of respondents stated that they were unaware of community concerns regarding the site and its operations, environmental investigations or cleanup.

Community Members Tell us How to Reach Them

A majority of respondents indicated the U.S. Mail is a preferred communication option. Some indicated a text, email or phone call would be preferred. A couple of respondents said the site's webpage was a good way for them to quickly see what is going on at the site and if there are any updates. Many respondents indicated that there are a couple of Republic-specific Facebook pages, including "Now you Know Republic Mo" and "Getting to Know Republic," that they suggested be used for communication, they also pointed out that the city often includes local events in the monthly utility bill. Republic Parks and Recreation's website was suggested as well as City Council meetings, signage at the site seemed to be seen by and found to be helpful to the community.

When the Community Wants to be Informed

Suggestions for when the community would like to be contacted varied widely. Some people said monthly, some said yearly, and some said only when necessary. Topics respondents would like to be notified of also varied and included: if something changes at the site, if there are results to report, if there are any kind of illnesses related to the site, if there are any negative impacts to the community, if there is new or urgent information, if something is being changed or fixed related to the site, site findings, or new findings and when there is general site information to share.

Community Comments, Suggestions and Recommendations Regarding the Site's Cleanup

A majority of respondents indicated they had nothing further to add regarding recommendations for cleaning up the site. One person suggested the department investigate using fungi to bio-remediate the groundwater contamination, and another person stated that they were just happy that the department is involved in the supervision of site cleanup. Concerningly, one person indicated their home has been sampled for vapor intrusion twice and they have never been informed of the test results. Another person said every time it rains, sewer gas comes up into their bathroom.

Site Repository

The site's information repository will contain certain site documents, including this CIP, and information regarding proposed or planned cleanup activities. Additionally, the information repository will contain the administrative record. As required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the administrative record will contain information that forms the basis for the selection of a response action, including verified sampling data, quality control and quality assurance documentation, chain of custody forms, site inspection and evaluation reports and other site-related reports and documents. The proposed plan as well as the decision document and supporting information will also be included in the administrative record. The information contained in the repository will be updated as new information becomes available.

Information Repository vs. Administrative Record

The information repository can be described as the physical location for storing site information. This is usually a centralized public location that provides easy access for community members. The administrative record is located within the information repository. Libraries, other public buildings and the internet are popular places for information repositories.

The administrative record contains information that explains why a response action was selected and conducted at a site. This includes all the factual and technical data considered or relied upon in the decision making process; as well as documentation showing how the public was involved in selecting the cleanup remedy. Additionally, all public comments submitted to the department during public comment periods, and the department's responses to those comments will be included in the administrative record.

The U.S. Environmental Protection Agency maintains an administrative record on their Solid State Circuits webpage at cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0701392

Solid State Circuits Site Information Repository Location:

Missouri Department of Natural Resources

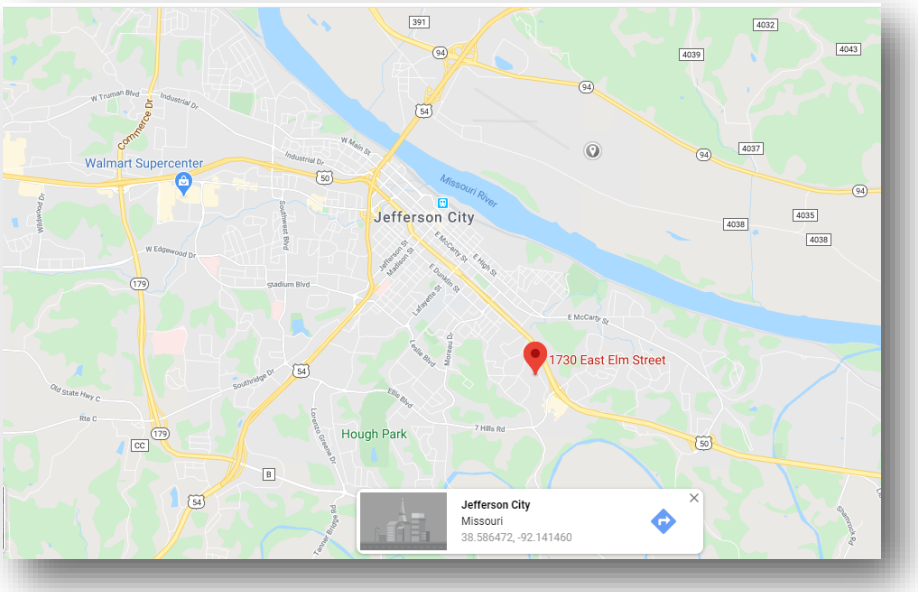
1730 E. Elm Street
Jefferson City, MO 65101

Ph: 800-361-4827

Building hours: Monday—Friday, 8 a.m. to 5 p.m.

*The building will be closed on all state and federal holidays.

Site information may also be requested through the Sunshine Law Request process.



Site Action Plan

In addition to the site information repository, the department will use several tools to ensure that effective communication with the community continues while environmental response activities are underway at the site. This CIP is intended to be a dynamic document that may change as the project progresses, as community information needs change or as other effective methods for maintaining two-way communication with the affected community are identified.

When establishing objectives for a site-specific community involvement action plan, several factors are taken into consideration, including state and federal requirements, site contaminants and extent of contamination, and community interest in and concerns regarding the site.

The department has and will continue to engage the community in decision making activities that will help guide site cleanup activities and final cleanup decisions. Based on community interview responses (pgs. 39-46), the department has developed a site action plan that will ensure the community receives site information in a way, and at a frequency that allows community members to be active participants in site cleanup decisions.

Community Involvement Activities at the Site

Based on community interviews, the department has committed to providing the following means of communication with the community:

Site Webpage - the department maintains a site webpage at dnr.mo.gov/waste-recycling/sites-regulated-facilities/superfund/interest/solid-state-circuits-inc. The webpage is updated as new information, public meeting or involvement opportunities become available. The U.S. Environmental Protection Agency also maintains a site webpage at cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0701392. The webpage includes links to site information and documents, including the administrative record.

Site Sheet - the department has created an informational sheet and will update it at key stages of the site cleanup process to summarize findings, impart decisions or convey other important site information. The site sheet will include non-technical language and supporting graphics as needed for clarity. Site sheets will be located in the information repository, on the department's website, and may be distributed at public meetings.

Public Notices - the department will place a public notice in the local newspaper when the site reaches key points as it goes through the CERCLA process and to notify the public of important site events, such as when announcing the beginning of public comment periods.

Public Meetings and Availability Sessions - the department will host public informational meetings about the Solid State Circuits site to get public comments at key times during the cleanup process, such as before cleanup decisions are made.

Comment During Public Comment Periods - comment periods are the primary way the department receives input from the community on proposed cleanup decisions. Comment periods usually last thirty days (may be extended, if a written request is submitted to and approved by the department) and are required at key points in the cleanup process. Comments are usually made in writing to the department or by speaking at a public meeting. The department will formally respond to all comments received.

Community Profile and Demographics

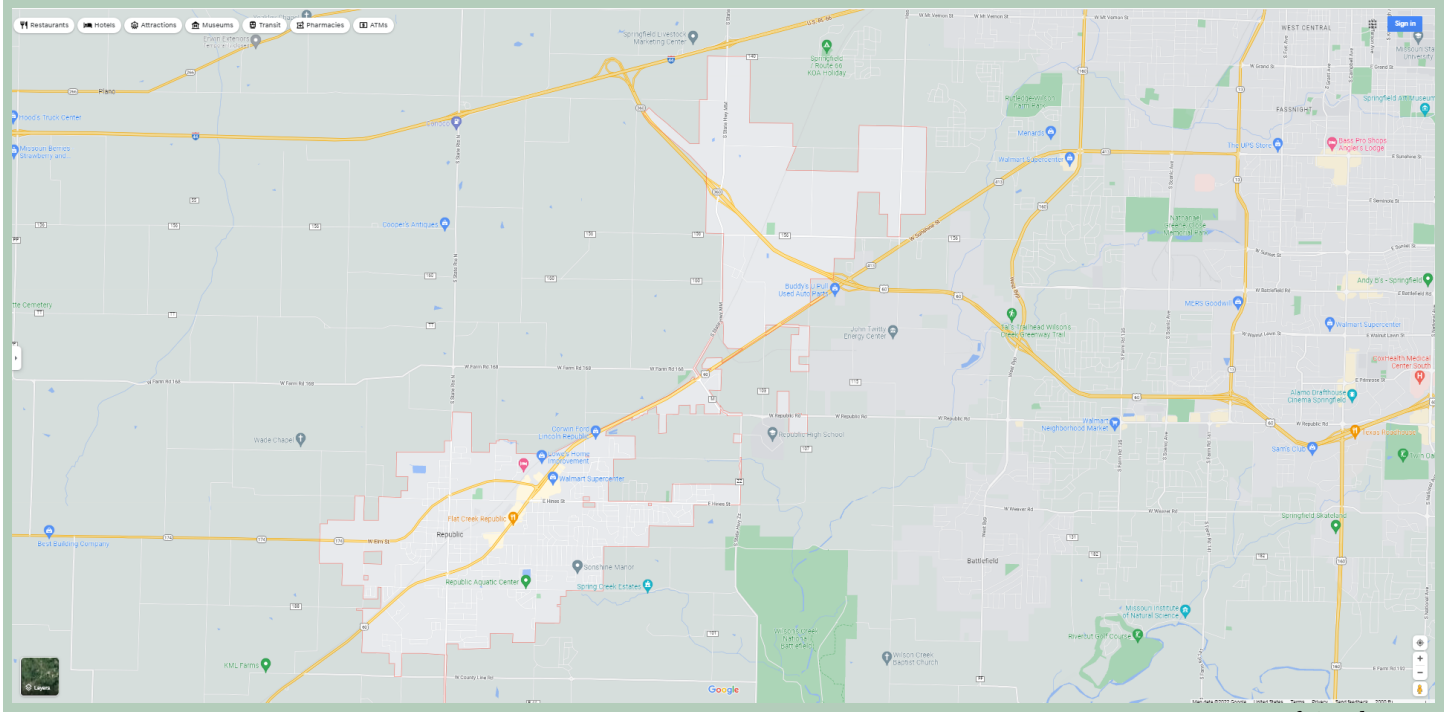
The city of Republic is located in Greene (mostly) and Christian counties, in Southwest Missouri. Republic is a part of the Springfield metropolitan area, and encompasses 13.31square miles, mostly in Greene County. According to 2020 census data, the population of Republic was approximately 18,750 at that time.

The city of Republic conducted a citizen satisfaction survey in May, 2021. Results from 725 respondents were published June 21, 2021. Survey results can be found on the city of Republic's website at https://www.republicmo.com/DocumentCenter/View/5526/2021-Republic-Citizen-Survey-Presentation.

According to the survey, 93% of respondents said Republic is a good place to live; 91% said it is a good place to raise children; 90% said their neighborhood was a good place to live; and 82% approved of the quality of the public schools. Negative comments included only 50% of respondents agreeing that Republic is a place to work, and cost of water and sewer services received a low rating of 53%. However, overall, 90% of respondents indicated that their overall quality of life living in Republic was very good, or good.

A majority of respondents (60%) said they prefer to receive communications from the city via social media and direct mail.

Map of Republic, Mo.



Map courtesy of Google maps

Community Profile and Demographics cont.

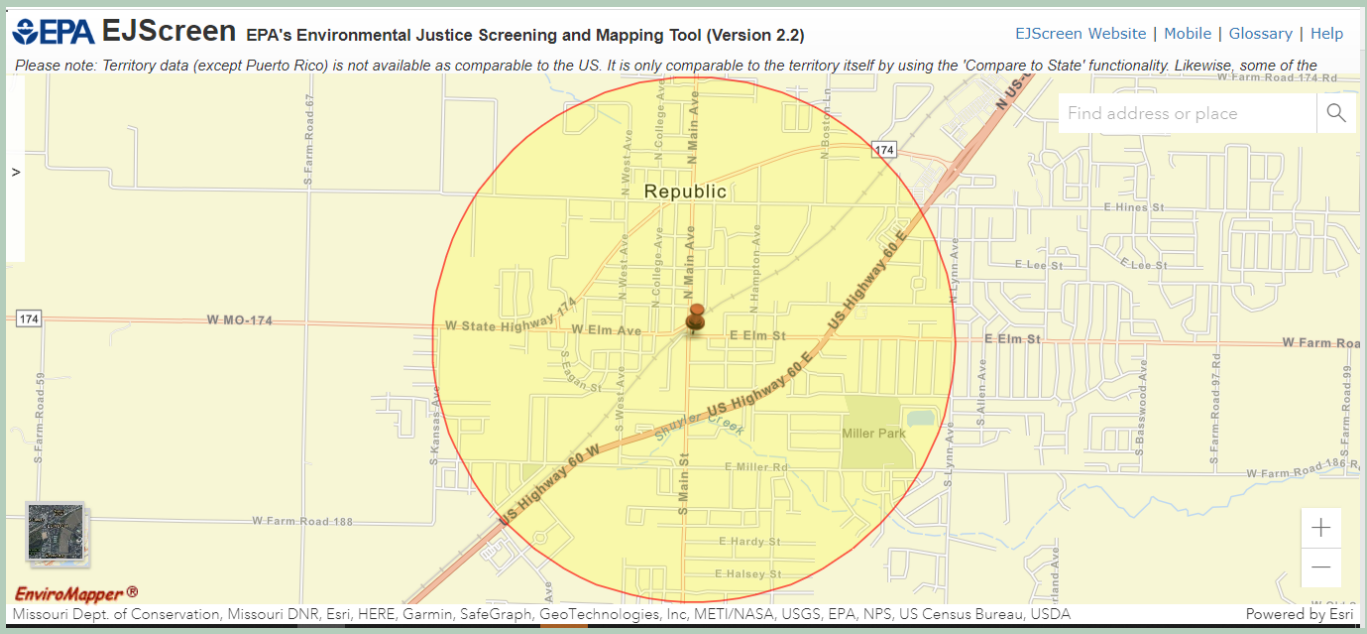
Solid State Circuits Site EJSCREEN ACS Demographic Summary

The U.S. Environmental Protection Agencies' EJSCREEN tool provides census information that describes the demographics of the local community immediately surrounding the Solid State Circuits site, within a one-mile radius. From the census data provided, a clearer picture of the community can be developed. In this community, a majority of community members are White, aged 18-plus with at least a high school diploma. Salaries were fairly evenly distributed, with 81% of households reporting earning a salary of 25,000 and above per year.

2016 - 2020 Census data results: there were 2,220 households, 65% were owner occupied and 35% were renter occupied. The local community consisted of 5,471 residents; of which, 95% were White, 1% were Black, and 1% reported being two or more races. Fifty percent were male, 50% female. Of the total local population, 9% were aged 0-4, 28% were 0-17, 72% were aged 18-plus and 18% were aged 65-plus. Of the residents who were aged 25 or older, 4% had less than a 9th grade education, 3% had between a 9th and 12th grade education with no diploma, 36% were high school graduates, 25% had some college with no degree, 7% had obtained an associates degree and 24% possessed a bachelors degree or more.

In the local community, 97% of people spoke only English at home, conversely, 3% spoke no English at home. Household income varied; 11% earned less than $15,000, 7% earned $15,000 to $25,000, 22% earned $25,000 to $50,000, 22% earned $50,000 to $75,000 and 37% reported earning $75,000 or more per year. This and more information can be found in the EJSCREEN reports on pages 27-29, in the appendix of this CIP.

Map of One Mile Radius from the Solid State Circuits Inc. Site



The map above demonstrates a one-mile radius from the Solid State Circuits site. Demographic information for citizens living within the one-mile boundary is summarized above. Both the map and associated demographic information were obtained from the U.S. Environmental Protection Agency's EJSCREEN site. Community dynamics change regularly; EJSCREEN is a source of demographic information used in this community involvement plan and was used to get a better picture of the most current demographics within the immediate community surrounding the site. The information is sourced from the U.S. Census Bureau Report for this area. Census information can be found on pgs. 27-29 of this community involvement plan.

Appendices

Appendix A

Site Contacts

Site Contacts

State Regulatory Site Contacts

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Missouri Department of Natural Resources
573-751-3907
Jennifer.lamons@dnr.mo.gov

State and U.S. Representatives

Missouri House of Representatives - Visit house.mo.gov to find contact information for your current Missouri representative.

Missouri Senate - Visit senate.mo.gov to find contact information for your current Missouri senator.

U.S. House of Representatives - Visit house.gov/representatives/find-your-representative to find contact information for your congressional representative.

U.S. Senate - Visit senate.gov/senators to find contact information for the current U.S. Senators for Missouri.

Republic City Officials

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Ph: 417-732-3500
Email

David Cameron
City Administrator
Ph: 417-732-3112
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Jared Keeling
Assistant City Administrator/Parks & Rec Director
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Email

Newspaper

Greene County Commonwealth *and continuing the Republic Monitor*
312 S. Hickory St.
Mt. Vernon, MO 65712
Ph: 417-466-2185

Newspaper - Springfield *News-Leader*
651 Boonville Avenue
Springfield, MO 65802
Ph: 417-836-1219
Email

Television Stations

KYTV Channel 3 - NBC
KRBK Channel 49 - Fox
KOLR Channel 10 - CBS
KYCW Channel 15 - The CW
KOZK Channel 21 - PBS
KSPR Channel 33 - ABC
KOZL Channel 27 - MyTV

Radio Stations

99HITFM - KADI-FM (99.5) - Gospel hits
104.7 The Cave - Pure Classic Rock
105.1 The Bull
Q102.1 Springfield's Rock Station
92.9 The Beat

Site Contacts cont.

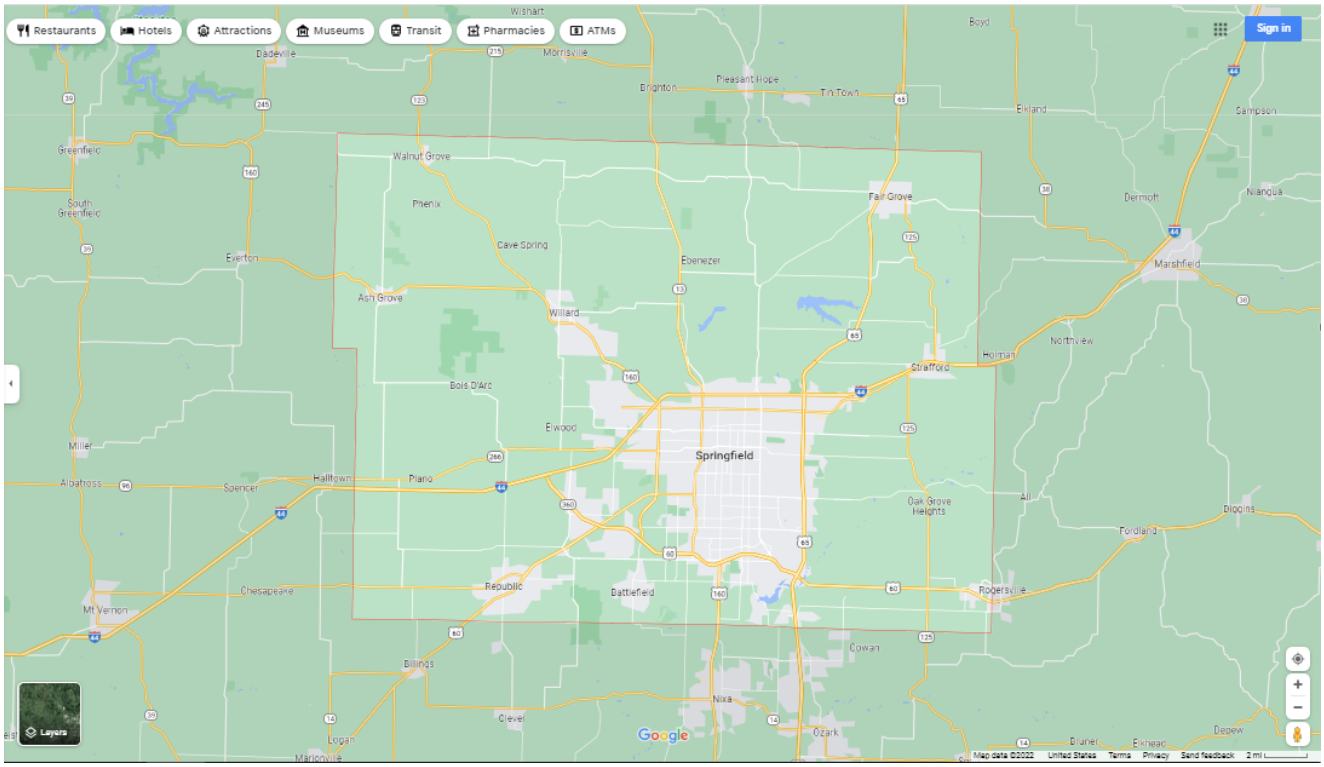
County Government

Greene County County Commission
Greene County County Commission Office
1443 N Robberson Ave, 10th floor
Springfield, MO 65802
Ph: 417-868-4112
Email: Commission

Springfield—Greene County Health Department
227 E. Chestnut Expressway
Springfield, MO 65802
Ph: 417-864-1658

Greene County Resource Management
Environmental Division
940 N. Booneville Ave. Room 315
Springfield, MO 65802
Ph: 417-868-4147

Greene County Maps



Map courtesy of Google Maps

Appendix B

What is Superfund?

What is Superfund?

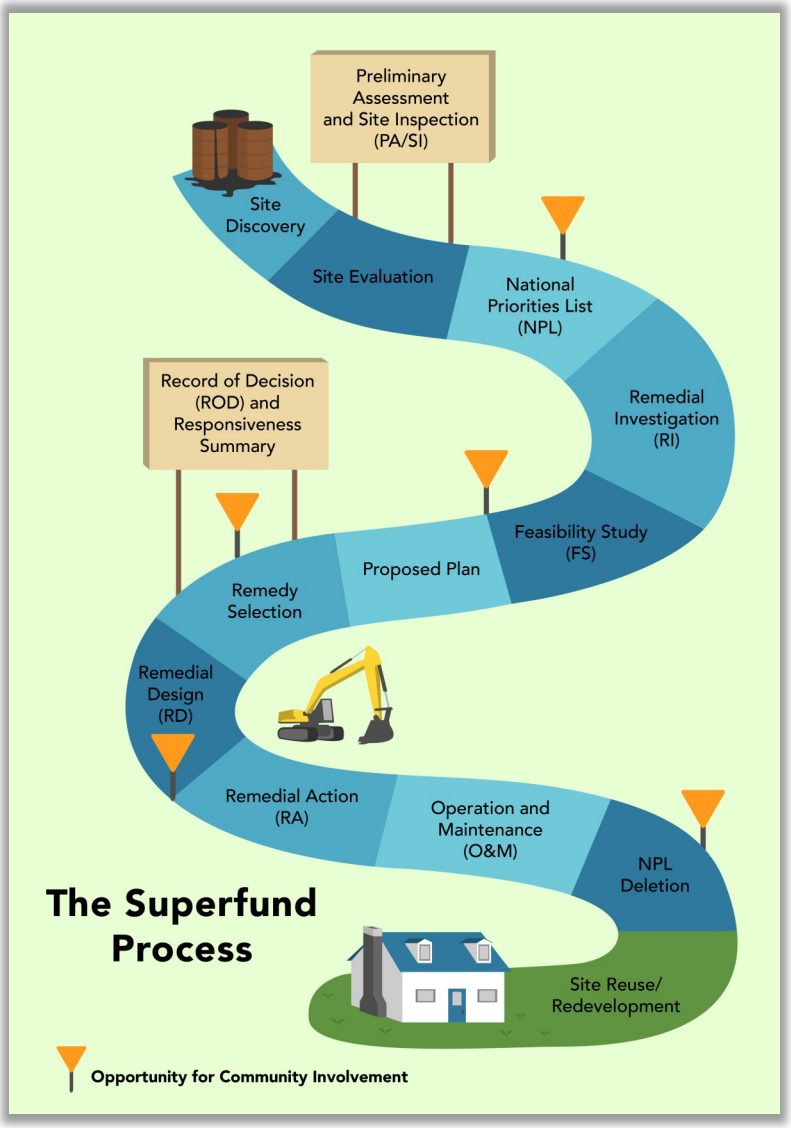
Thousands of contaminated sites exist nationally due to hazardous waste being dumped, left out in the open, or otherwise improperly managed. These sites include manufacturing facilities, processing plants, landfills and mining sites. In the late 1970's, toxic waste dumps such as Love Canal and Valley of the Drums received national attention when the public learned about the risks to human health and the environment posed by contaminated sites. In response, Congress established the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1980.

CERCLA is informally called Superfund. It allows and provides guidance for cleaning up contaminated sites. It also forces the parties responsible for the contamination to either perform cleanups, or reimburse EPA or state governments for EPA or state-lead cleanup work. When there is no viable responsible party, Superfund gives EPA or state government the funds and authority to clean up contaminated sites.

Superfund's goals are to:

- Protect human health and the environment by cleaning up contaminated sites;
- Make responsible parties pay for cleanup work;
- Involve communities in the Superfund process; and
- Return Superfund sites to productive use.

Gold signs on the graphic indicate times during the Superfund cleanup process where the public can get involved. Examples of community involvement available during these times could include the following: public notices, public meetings, visiting the information repository and reading site information, and providing comments and suggestions during public comment periods.



Superfund Cleanup Process Explained

The Superfund process is also known as the site cleanup process. It is important to have a general understanding of the Superfund cleanup process in order to understand where input from the public is appropriate, and why. Cleaning up Superfund sites is a complex, multi-phase process. The following information gives details about each phase, how they relate to the cleanup process and provides opportunities for community involvement:

Assessment

Preliminary Assessment/Site Investigation (PA/SI)

This phase includes a review of historical information and includes visiting a site to evaluate the potential for a release of hazardous substances. The lead agency for the site determines if the site poses a threat to people and the environment and whether hazards need to be addressed immediately or additional site information will be collected.

Opportunities for Community Involvement during the PA/SI Phase:

- Provide any information you may have about the site to the department

National Priorities List (NPL) Site Listing Process

The NPL is primarily an information resource that identifies sites that warrant cleanup. It is a list of the worst hazardous waste sites identified by Superfund. The list is largely based on the score a site receives from the Hazard Ranking System. When a site is listed on the NPL, a public notice is issued, public comments are received and a responsiveness summary is issued

Opportunities for Community Involvement During the NPL Listing Process:

- Read information about the site and the lead agency's proposal to list the site on the NPL
- If you have concerns about the site listing, prepare and submit comments on the proposal during the public comment period.

Characterization

Remedial Investigation/Feasibility Study (RI/FS)

Also called site characterization, this stage involves an evaluation of the nature and extent of contamination at a site and assesses potential threats to human health and the environment. This stage of the process also includes evaluation of the potential performance and cost of the treatment options identified for a site. During the RI/FS phase, the department will issue a public notice to let the community know an information repository has been established for the site. At RI/FS and propopsed plan completion, the department will issue a public notice, establish a public comment period and hold a public meeting.

Opportunities for Community Involvement During the RI/FS Phase:

- Read the proposed plan for cleaning up the site and participate in public meetings or other events regarding the proposed plan; ask questions and provide comments on plans for cleanup and on reuse options for the site during the public comment period
- Visit the information repository, read site documents and send comments to the department
- Read the responsiveness summary to learn plans to address community concerns

Superfund Cleanup Process cont.

Selection of Remedy

Records of Decision (ROD)

The ROD explains which cleanup alternatives will be implemented at the site. Leading up to the issuance of the ROD, the department recommends a preferred remedy and presents the cleanup plan in a document called a proposed plan, for public comment. Following the public comment period, the department issues a final ROD. The department will issue a public notice at the time the ROD is issued.

Opportunities for Community Involvement during the ROD

- Tell the department how the community wants the site to be used in the future
- Read the ROD for cleaning up the site
- Participate in public events concerning the ROD
- Visit the information repository and read the ROD and supporting documents, such as the proposed plan and other information that formed the basis for the department's response selection

Cleanup

Remedial Design/Remedial Action (RD/RA)

Detailed cleanup plans are developed and implemented during the RD/RA stage. Remedial design includes development of engineering drawings and specifications for site cleanup. Remedial action follows design and involves the actual construction or implementation phase of site cleanup.

Opportunities for Community Involvement during RD/RA

- Learn about the final design for the cleanup by attending public events or reading information distributed by the department
- Visit the site to observe cleanup activities
- Attend public meetings about progress at the site, become involved in the conversation
- Contact the department project manager or the community involvement coordinator with questions or comments.

Post-Construction

Construction Completion

This is the point in the cleanup process when any necessary physical construction needed for the cleanup has been completed (even though final cleanup levels may not have been reached).

Superfund Cleanup Process cont.

Post Construction Completion

This phase of the process ensures Superfund cleanups provide for the long-term protection of human health and the environment. Solid State Circuit's site activities during this phase will include operating and maintaining long-term cleanup technologies in working order, regularly reviewing the site to be sure that the cleanup continues to be effective, and enforcing any necessary restrictions to minimize the potential for human exposure to contamination.

Opportunities for Community Involvement during Post Construction Completion

- Participate in and review results of regular site reviews
- Invite the department's project manager and community involvement coordinator to site events to discuss results of the five-year-review

National Priorities List Deletion

Once cleanup goals have been achieved and the site is fully protective of human health and the environment, the site will be deleted from the NPL. The department will publish a public notice of intention to delete the site from the NPL and will offer the opportunity for public comment. When the public comment period is over, the department will issue a responsiveness summary to formally respond to public comments. The department will then place a final deletion report in the information repository.

Opportunities for Community Involvement related to NPL Deletion

- Read the department's proposal to delete the site from the NPL and submit your comments to the department
- Read the department's responsiveness summary to find out how we are addressing the public comments received
- Read the final deletion report, which is available at the information repository

Site Reuse/Redevelopment

Once sites have been cleaned up, the department works with communities to help return these sites to productive use; these uses can be industrial or commercial, such as factories and shopping malls; community infrastructure, such as housing, public works facilities, and transportation; recreational, such as golf courses, parks and ball fields; or for ecological resources, such as wildlife preserves and wetlands. No matter what use is appropriate for a site, the community benefits from restoring the site to productivity. Property can once again add to the economic, social and ecological value of the community.

Opportunities for Community Involvement Related to Site Reuse

- Work with the department, your local government and your neighbors to explore redevelopment opportunities for the site
- Be supportive of redevelopment plans once they have been agreed upon

Appendix C

EPA's EJSCREEN Demographic Report

EJSCREEN ACS Summary Report

Location: User-specified point center at 37.118214, -93.480346
Ring (buffer): 1-miles radius
Description: Solid State Circuits Inc. Site

Summary of ACS Estimates	2016 - 2020
Population	5,471
Population Density (per sq. mile)	1,660
People of Color Population	359
% People of Color Population	7%
Households	2,220
Housing Units	2,246
Housing Units Built Before 1950	312
Per Capita Income	26,662
Land Area (sq. miles) (Source: SF1)	3.30
% Land Area	100%
Water Area (sq. miles) (Source: SF1)	0.00
% Water Area	0%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	5,471	100%	560
Population Reporting One Race	5,378	98%	815
White	5,193	95%	580
Black	49	1%	72
American Indian	3	0%	12
Asian	27	0%	28
Pacific Islander	0	0%	12
Some Other Race	107	2%	111
Population Reporting Two or More Races	93	2%	92
Total Hispanic Population	168	3%	111
Total Non-Hispanic Population	5,303		
White Alone	5,112	93%	580
Black Alone	49	1%	72
American Indian Alone	3	0%	12
Non-Hispanic Asian Alone	27	0%	28
Pacific Islander Alone	0	0%	12
Other Race Alone	19	0%	83
Two or More Races Alone	93	2%	92
Population by Sex			
Male	2,754	50%	362
Female	2,718	50%	349
Population by Age			
Age 0-4	476	9%	147
Age 0-17	1,522	28%	246
Age 18+	3,950	72%	402
Age 65+	976	18%	269

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020 .

EJSCREEN ACS Summary Report

Location: User-specified point center at 37.118214, -93.480346
Ring (buffer): 1-miles radius
Description: Solid State Circuits Inc. Site

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	3,639	100%	339
Less than 9th Grade	147	4%	89
9th - 12th Grade, No Diploma	114	3%	89
High School Graduate	1,325	36%	209
Some College, No Degree	904	25%	283
Associate Degree	265	7%	124
Bachelor's Degree or more	883	24%	177
Population Age 5+ Years by Ability to Speak English			
Total	4,995	100%	476
Speak only English	4,862	97%	452
Non-English at Home[1+2+3+4]	133	3%	94
[1]Speak English "very well"	112	2%	93
[2]Speak English "well"	21	0%	30
[3]Speak English "not well"	0	0%	12
[4]Speak English "not at all"	0	0%	12
[3+4]Speak English "less than well"	0	0%	12
[2+3+4]Speak English "less than very well"	21	0%	30
Linguistically Isolated Households*			
Total	0	0%	12
Speak Spanish	0	0%	12
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	0	0%	12
Speak Other Languages	0	0%	12
Households by Household Income			
Household Income Base	2,220	100%	257
< $15,000	244	11%	254
$15,000 - $25,000	151	7%	134
$25,000 - $50,000	496	22%	148
$50,000 - $75,000	499	22%	166
$75,000 +	830	37%	148
Occupied Housing Units by Tenure			
Total	2,220	100%	257
Owner Occupied	1,438	65%	171
Renter Occupied	782	35%	268
Employed Population Age 16+ Years			
Total	4,047	100%	370
In Labor Force	2,672	66%	290
Civilian Unemployed in Labor Force	113	3%	77
Not In Labor Force	1,376	34%	298

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified point center at 37.118214, -93.480346
Ring (buffer): 1-miles radius
Description: Solid State Circuits Inc. Site

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	1,716	100%	486
English	1,669	97%	469
Spanish	31	2%	115
French, Haitian, or Cajun	0	0%	32
German or other West Germanic	0	0%	17
Russian, Polish, or Other Slavic	0	0%	17
Other Indo-European	10	1%	44
Korean	0	0%	17
Chinese (including Mandarin, Cantonese)	0	0%	17
Vietnamese	0	0%	17
Tagalog (including Filipino)	7	0%	28
Other Asian and Pacific Island	0	0%	17
Arabic	0	0%	17
Other and Unspecified	0	0%	17
Total Non-English	47	3%	675

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

Appendix D

Site Sheet

MISSOURI NATURAL RESOURCES

Solid State Circuits Inc. Site
Republic, Missouri
Greene County

April 2024

Site Description

The Solid State Circuits Inc. (SSC) site is a former printed circuit board manufacturing facility that operated in downtown Republic between 1968 and 1973. SSC operated in the northern portion of a late 19th-century grain mill building, located at the southeast corner of Elm and Main streets. The manufacturing process involved the use of trichloroethylene (also known as trichloroethene or TCE) as a cleaning solvent, which was stored and used in the building's basement. A TCE release from the facility into the environment caused a TCE groundwater plume. A fire destroyed the building in 1979, after which the building debris was pushed into the basement. The property is currently an undeveloped lot surrounded by fencing. The land bordering the site is a mix of commercial, industrial, and residential properties.

In 1982, the Missouri Department of Natural Resources conducted public drinking water sampling as part of the Environmental Protection Agency's (EPA) National Synthetic Organic Chemical Survey. Sampling results detected TCE in City Well #1, located 600 feet south of the SSC facility; the city immediately took the well out of public use. A subsequent investigation conducted by SSC identified the facility as the source of TCE contamination in the well. There has been no detection of TCE in any of Republic's other public or private wells.

The Missouri Remedial Action Corporation Inc. (MRAC), an entity formed following a series of corporate successions and acquisitions by SSC, is performing the site investigation and cleanup. In 1986, EPA placed the SSC site on the National Priorities List. Since then, the department has overseen site investigation and cleanup actions conducted by MRAC.

Description of Contamination

The primary contaminants of concern at the SSC site are TCE and related chemicals that form when TCE breaks down in the environment. Exposure to TCE has been associated with a number of adverse health effects. Additional information about the health effects of TCE exposure are available in the Agency for Toxic Substances and Disease Registry's fact sheet: atsdr.cdc.gov/toxfaqs/tfacts19.pdf.

The exact volume of TCE released and how the releases occurred at the site are not known; however, sampling data indicate that TCE entered the subsurface at the facility through sumps and floor drains located in the building's basement. After traveling vertically through 10-15 feet of clay soil, TCE traveled horizontally within the upper portion of the bedrock surface, which has fractures and karst features such as underground openings, losing streams and springs (common geologic features in southwest Missouri and in the Republic area).

It is believed that an old well with a deteriorated casing in the building's basement allowed TCE to travel vertically several hundred feet into the deeper drinking water aquifer where City Well #1 pulled it in. EPA plugged this basement well shortly after discovering it in 1985.

In the 1980s, EPA detected TCE contamination in soil next to the facility. In 2010, MRAC discovered additional TCE contamination in the area. Additionally, MRAC detected TCE in soil along subsurface sewer lines south of the facility, where presumably it moved out of the sewer through gaps in pipe seams and broken portions of the aging clay tile sewer pipe. TCE vapors from the soil contamination are presumably entering the sewer, leading to concerns about TCE vapors getting into buildings connected to the sewer south of the former facility. The department and MRAC believe that TCE was discharged to the sewer when the facility was active.

From 2007 to present, MRAC has conducted several sampling efforts to evaluate the potential for TCE vapors to travel through the subsurface and enter overlying structures, a process known as vapor intrusion (VI). TCE vapors can enter structures in two ways: by traveling within soil gas beneath building foundations or crawlspaces, then entering through utility accesses, sumps, floor drains, foundation cracks, and seams; or by travelling through sewers, then entering through poorly sealed plumbing connections.

Between 2018 and 2022, MRAC implemented several vapor-reduction measures at the only residence where TCE was detected to try to minimize potential impacts on the residents' health. These measures included installing equipment to purify air inside the building and to remove vapors from beneath the building. In November 2020, MRAC conducted a smoke test at the residence, which showed sewer vapors were entering the basement through a faulty plumbing connection. In December 2020, MRAC repaired the home's plumbing. Follow-up smoke testing and indoor air testing showed that the connection had been successfully sealed and was preventing further sewer vapor infiltration into the residence. In March 2022, MRAC conducted additional indoor air sampling at this residence to assess the effectiveness of these measures.

A separate fact sheet with additional information about VI is available from the Missouri Department of Health and Senior Services at:
health.mo.gov/living/environment/hazsubstancesites/pdf/VaporIntrusion.pdf

Investigation and Cleanup Activities

As shown in the site map below, the site is organized into four areas: Area 1 is the parcel where SSC operated; Area 2 includes the Main Street corridor between Area 1 and the former location of City Well #1; Area 3 includes the area around former City Well #1; and L-shaped Area 4 extends farther south along the Main Street corridor before extending east along Brooks Street.

Following is a summary of site-related investigations and other actions:

- Soil Investigations:

  Between 1985 and 2018, MRAC collected and analyzed more than 400 soil samples from multiple boring locations and multiple depths in all four areas. Results showed the highest TCE levels were in the soil directly beneath the former manufacturing building and in several locations near underground sewer lines to the south, along Main Street.

- Soil Cleanup:

  In 1985, EPA excavated more than 2,000 cubic yards of contaminated soil and building debris from the facility's basement and the surrounding area, which was transported off-site for disposal at an approved facility. In 2012, MRAC treated approximately 2,500 cubic yards of contaminated soil in Area 1 by physically mixing the soil in place with a substance designed to reduce TCE. In 2015, MRAC treated approximately 6,000 cubic yards of contaminated soil in Areas 2 and 3 by injecting substances into the soil to reduce TCE and its breakdown chemicals. In 2020, MRAC treated an additional 2,900 cubic yards of soil in Area 1 by injecting a combination of treatment substances into the subsurface to further reduce TCE and its breakdown chemicals. In spring 2023, MRAC conducted shallow groundwater sampling as part of the Force Majeure Supplemental Sampling Event 27 in Areas 1, 2, and 3 to evaluate the

effectiveness of the 2015 and 2020 subsurface injections. TCE in Areas 1, 2, and 3 has been significantly reduced, but MRAC recommends continued sampling to verify that the conditions are favorable for further TCE reduction efforts.

- Groundwater Investigations:

  To date, EPA and MRAC have installed more than 50 groundwater monitoring wells at the site, as shown in the attached map. Regular well sampling has identified TCE and its breakdown chemicals in groundwater extending south of the former facility, primarily along the Main Street corridor to U.S. Highway 60. MRAC plans to install additional groundwater monitoring wells in 2024 to further define the impacted groundwater's boundaries.

- Groundwater Cleanup:

  In 1993, MRAC installed a groundwater recovery and treatment system. The system consisted of six groundwater extraction wells, four of which were within Area 1 and two were between Area 1 and U.S. Highway 60. The system stripped TCE from extracted groundwater before discharging it to the sewer. However, the system's effectiveness dropped significantly after the initial 10-15 years of operation. Since a 2011 fire destroyed the treatment system, MRAC has conducted groundwater extraction only at the southernmost extraction well, located near U.S. Highway 60. TCE levels in the recovered groundwater from that location are low enough to allow direct discharge of untreated recovered groundwater directly to the sewer.

  In 2015, MRAC also treated contaminated groundwater in Areas 2 and 3 by injecting substances into the subsurface to degrade TCE and its breakdown chemicals. In 2020, MRAC treated groundwater in Area 1 by injecting a combination of treatment substances to reduce TCE and its breakdown chemicals.

  MRAC will periodically sample groundwater in Areas 1, 2, and 3 to assess the effectiveness of the 2015 and 2020 treatments in those areas. Additionally, following installation and testing of additional monitoring wells in 2024, MRAC will assess conditions and evaluate potential remedies for addressing remaining TCE contamination in groundwater.

- Vapor Intrusion Investigation:

  TCE vapors have been detected in sewer mains and shallow soil adjacent to subsurface utilities along the Main Street corridor and east along Brooks Street. In 2017, MRAC and the department identified eight properties for VI sampling. MRAC requested access to the eight properties to conduct VI sampling; property owners granted access to three of them. Of the three properties sampled, TCE was detected above the health-based screening level in one residential building with a basement foundation.

  In December 2020, MRAC conducted additional sewer vapor sampling at manhole locations along Main, Mill, and Brooks streets to define the extent of sewer gas impacts. In 2021, MRAC repeated sampling at those same locations during warm weather conditions. Based on those findings, and proximity to the source areas, MRAC and the department identified 28 properties to consider for additional VI sampling.

  To further assess sanitary sewer conditions and to map sewer lateral locations, a video survey of the sanitary sewer was completed and showed a need to repair portions of the sewer. In November of 2021, MRAC installed cured-in-place piping (CIPP) along the sewer main at Main Street, from Elm Street to Brooks Street. A 400-foot section of CIPP was also installed along Brooks Street to prevent further TCE migration from the sewers into the surrounding buildings. Vapor intrusion and indoor air sampling of nearby buildings in 2022 confirmed that TCE was not migrating from the sewer into the buildings.

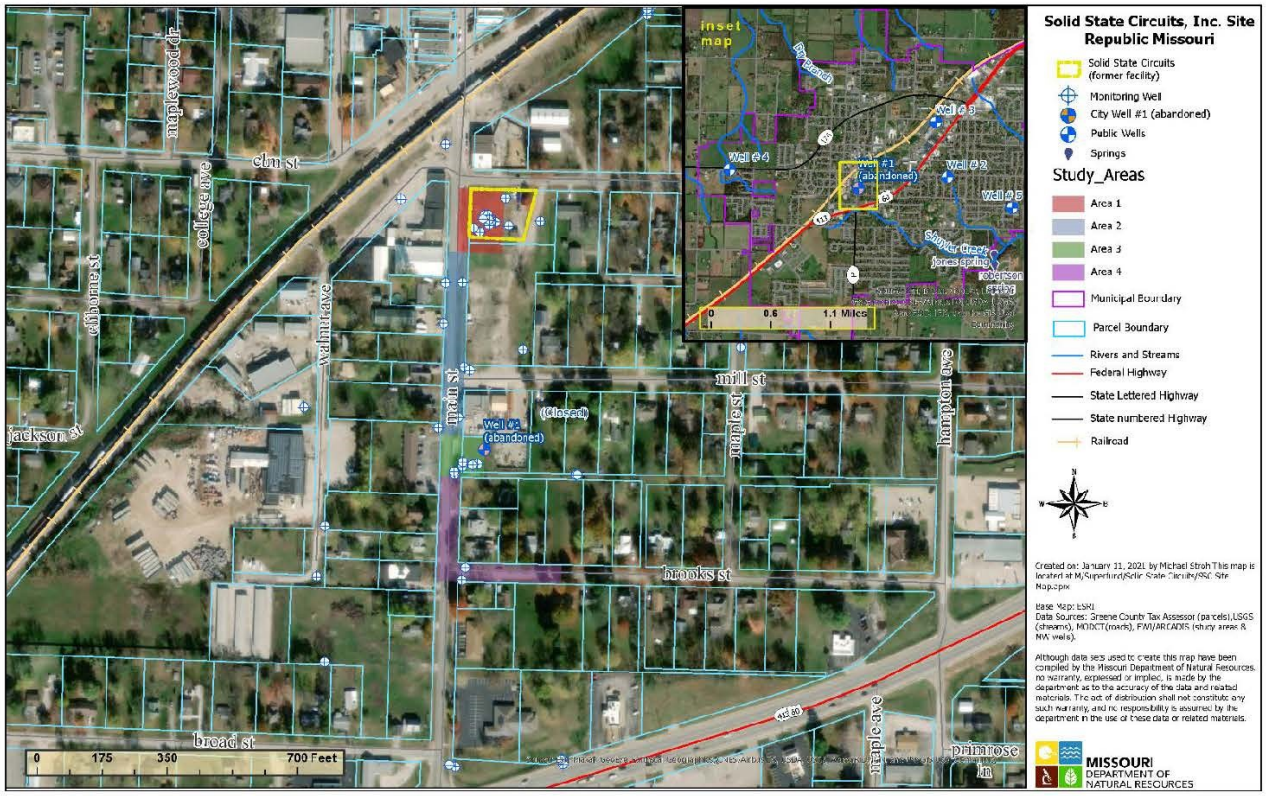
  In the winter of 2021, the department increased communication and education efforts to expand public awareness of potential health concerns associated with exposure to TCE

contamination. The department assisted MRAC in gaining access to other potentially affected properties to conduct VI sampling. The sampling was conducted in March, August and October 2022 to more clearly define the extent of TCE contamination from the site and to identify potential exposures to TCE above health-based levels. The investigation found no exposure to TCE above health-based risk levels.

For More Information

For more information regarding the site, contact the department's Environmental Remediation Program at 573-751-4187. For health-related questions about TCE, contact the Missouri Department of Health and Senior Services at 573-751-6102.

Site Location Aerial Map



PUB2970

Appendix E

Community Involvement Interview Form

Community Involvement Interview Questions for the

Solid State Circuits Site

Located at the southeast corner of Elm and Main streets, in old downtown, Republic

Date: _____

Interviewer: _____

The purpose of this interview is to assess community knowledge of the Solid State Circuits Inc. site and the ongoing cleanup process at the site, as well as survey interest in receiving site information and communication preferences of the community. A site is defined as a volume of contaminated soil and/or goundwater, it is a location that is contaminated with hazardous waste that has been designated for management and cleanup.

The information you provide in this interview will be used to create and update the community involvement plan to maximize opportunities for the community to participate in the site cleanup process. The plan is a public document, but your contact information will not be part of the document and will remain confidential. Should you have any questions after this interview, please contact Jennifer Lamons by phone at 573-522-1540, or by email at jennifer.lamons@dnr.mo.gov.

Name: _____

Affiliation: _____ (i.e. local resident, business owner, civic or public interest organization, homeowner association, local government representative).

Address: _____

Email: _____

Phone number: _____

1. How long have you lived or worked in this community? _____

2. Are you familiar with the Solid State Circuits site? **Yes** **No** If yes, what has been your involvement with the site (nearby resident, past employee, attended past meetings, etc.)?

3. What do you know about the site (operations, history, environmental issues related to the site)?

4. What do you know about contaminants related to the site?

5. What is your understanding of the environmental investigation and cleanup activities being conducted at the site?

6. Are you aware of any community concerns regarding the site and its operation or environmental investigations or cleanup? **Yes** **No** If yes, please list:

7. What are your general thoughts about the site? Do you have any fears or concerns regarding this site? (Please describe your water, habitat, recreation, working at the site, etc.)

8. Do you have cell phone or computer access at home or elsewhere, or access to a public library where you could go to use the computer to access the site's webpage located at dnr.mogov/waste-recycling/sites-regulated-facilities/superfund/interest/solid-state-circuits-inc,, to obtain site informationa nd updates?

   Yes No

9. Are you currently receiving information about the site? If yes, how are you receiving information? If no, would you like to be informed about the site's activities and progress?

10. If you would like to receive site information and activity updates, what is the best way to reach you? (Website, email, public meeting, association or local group meeting, flier, newsletter, etc.) How often should information be provided to the community?

11. What types of environmental information related to the site would you like to receive? (Skip if answered no to #13.)

12. Is there anyone else you recommend we speak with regarding the environmental issues related to theis site or site investigations, such as concerned citizens, community groups, environmental groups, etc?

13. Do you know of any community meetings or gathering places where groups of community members get together regularly?

14. What outlets are used most by people in the community to communicate local events? (Such as newspapers, websites, blogs, regular community meetings, community newsletters, social media sites, etc.)

15. Public meetings are one way to inform the community about site activities and updates. How likely is it that you will attend public meetings to receive site information? Please indicate 1 - 5, one being least likely, 5 being most likely to attend public meetings.

   (Least likely) 1 2 3 4 5 (Most likely)

16. Do you have any other information we should know or suggestions regarding the site or site communications?

Appendix F

Community Interview Responses

Interviewee	1. How long have you lived or worked in this community?	2. Are you familiar with the Solid State Circuits site? What has been your involvement with the site?	3. What do you know about the site? (Site operations, history, environmental issues..?)	4. What do you know about contaminants related to the site?
1. Homeowner	Since 1975	Yes, my husband was a volunteer fire-fighter and helped put out the first facility fire	Just information DNR had given me	TCE is a hazardous chemical
2. Local Resident	Since 2017	No	Nothing	Nothing
3. Homeowner	9 years	No	Nothing	Nothing
4. Renter	1 year	No	I only know because I was taking a walk and saw a sign	Nothing
5. Homeowner	4 years	Yes, lived around it my whole life	Sign on fence says it's a biohazard site	My house has been checked for vapor intrusion, didn't find anything
6. Homeowner	8 years	No	Back in the '70's it was there, then they had a breach of their containment pool	Harmful– can be gas, nasty critters
7. Renter	7 years	Yes, heard about it last year, they were wanting to take dirt samples and put something in cellar to test	Seems pretty serious	I'd like to know more
8. Homeowner	Since '05	No	Just that it was a factory and a cleaner soaked into the soil	Nothing
9. Homeowner	21 years	No, just know where site is at	Nothing	Nothing
10. Homeowner	20+ years	Yes, I grew up here	The basics, I was around here when all that happened	Nothing
11. Local Resident	4 years	No	Nothing	Nothing

Interviewee	1. How long have you lived or worked in this community?	2. Are you familiar with the Solid State Circuits site? What has been your involvement with the site?	3. What do you know about the site? (Site operations, history, environmental issues..?)	4. What do you know about contaminants related to the site?
12. Church Employee	39 years/church 68 years	Yes– I've always known about this site and the issues there since the '70's	Chemical created issues with the well on Main St.	Chemical contaminated well
13. Resident Owner	Over 20 years	Yes - I have health issues, nerve weakness	Effects on previous and current generations health	Not enough, more after reading literature provided and phone conversations
14. Local Resident	14 years	Yes, nearby resident	That it closed	Nothing
15. Resident	Since 2021	No	Nothing	Nothing

Interviewee	5. What is your understanding of the environmental investigation/ cleanup activities being conducted at the site?	6. Are you aware of any community concerns regarding the site and its operation or environmental investigations or cleanup?	7. What are your general thoughts about the site? Do you have fears or concerns?	8. Do you have cell phone or computer access at home or elsewhere, or access to a public library where you could go to use the computer to access site information?
1. Homeowner	I know they've done their best to clear it out of here at least	No, everyone I know thinks they're getting close to the end of it	Well, I didn't think I did...	No computer access and don't use cell phone for internet
2. Local Resident	None	No, never heard anyone talk about it	I'm indifferent, it's well kept	Yes
3. Homeowner	None	No	Have there been any illnesses because of it	Yes
4. Renter	None	No	I have concerns about the planet and contamination and I'm all about finding solutions	Yes
5. Homeowner	None	No, I just talk with my neighbors about it	Just make sure everything is safe, I have children	Yes
6. Homeowner	Next to nothing	No	Yeah, I worry it will somehow affect my property value	Yes
7. Renter	You guys are doing sampling	No	Worried about if the soil is contaminated—I have a garden	Yes
8. Homeowner	They are testing soil to make sure it's not affecting anyone in homes	No	No, I think they're on top of things and I'm not sick	Yes
9. Homeowner	Drilled holes in Main St., vapor intrusion sampling	No	No fears or concerns	Yes

Interviewee	5. What is your understanding of the environmental investigation/ cleanup activities being conducted at the site?	6. Are you aware of any community concerns regarding the site and its operation or environmental investigations or cleanup?	7. What are your general thoughts about the site? Do you have fears or concerns?	8. Do you have cell phone or computer access at home or elsewhere, or access to a public library where you could go to use the computer to access site information?
10. Homeowner	I know they've done things	No, new people have moved in	How has the contamination affected us and is it still affecting us	Yes
11. Local Resident	Nothing	No	Interested to see if some of it has gotten into the water	Yes
12. Church Employee	It's tested regularly and well was took out of use	No	There is always a fear of the long-term issues, don't know how long people were exposed	Yes
13. Resident Owner	Routine monthly observations	Yes, N/A	Elderly people on this block have suffered some form of cancer for last 40 years, I worry if I should move from here	Yes
14. Local Resident	I was totally unaware	No	I live so close and never knew about the site contamination, fears about water contamination and sewer gas	Yes
15. Resident	Nothing	No	I want to know that my air and water quality are safe	Yes

Interviewee	9. Are you currently receiving information about the site? If yes, how are you receiving information, if no, would you like to receive information?	10. If you would like to receive site information and activity updates, what is the best way to reach you? How often would you like to receive site information?	11. What types of environmental information related to the site would you like to receive?	12. Is there anyone else you recommend we speak with regarding the environmental issues related to this site or site investigations or cleanup?
1. Homeowner	No, yes	Call, text or email, monthly	General information on how cleanup is going and what they've found	No
2. Local Resident	No, yes	Email, once a quarter, unless there are issues with it [the site]	If it's having any negative impact	Facebook group
3. Homeowner	No, yes	Text, at least once a month	Any kind of illnesses related to site and test results	No
4. Renter	No, yes	Email	Hazards, anything that would directly affect me	No
5. Homeowner	No, yes	Email, webpage	If something's an issue of if something's being changed or fixed	Neighborhood people, dog facility
6. Homeowner	No, sure	Through the [site] website	Progress of cleanup determinations of any exploration/ findings	People next door
7. Renter	Yes, it seems like once a year	Email, text, call	Anything new	Anyone in the neighborhood
8. Homeowner	No, yeah, I guess	Mail	If you found something else	People next door owns property on Marin. St.
9. Homeowner	No, yes	Mail, webpage	Any dangers to the neighborhood	No
10. Homeowner	Yes, only when you come around	Mail, once a year	What's being done, anything new at site	No
11. Local Resident	No, yes	Cell call, text or email– monthly	General information on how cleanup is going and what they've found	No

Interviewee	**9. Are you currently receiving information about the site? If yes, how are you receiving information, if no, would you like to receive information?**	**10. If you would like to receive site information and activity updates, what is the best way to reach you? How often would you like to receive site information?**	**11. What types of environmental information related to the site would you like to receive?**	**12. Is there anyone else you recommend we speak with regarding the environmental issues related to this site or site investigations or cleanup?**
12. Church Employee	No	Newsletter or flyer 2x per year	Basic update on testing and those test results	N/A
13. Resident Owner	No, yes would like information unless it is otherwise safe to live here	Any means necessary, often!	Maps made easier to read– info on this matter is greatly needed	Senior residents at 139 E. Mill St.
14. Local Resident	No, yes I'd like to be kept informed	Email	All	Other neighbors on Maple that were also unaware
15. Resident	No	N/A	N/A	N/A

Interviewee	**13. Do you know of any community meetings or gathering places where groups of community members get together regularly?**	**14. What outlets are used most by people in the community to communicate local events?**	**15. Public meetings are one way to inform the community about site activities and updates. How likely is it that you would attend a public meeting? (Scale of 1-5, 5 most likely.**	**16. Do you have any other information we should know or suggestions regarding the site or site cleanup or communications?**
1. Homeowner	Town Hall meeting	Facebook page "Now You Know Republic Mo"	4—this really interests me	No
2. Local Resident	City council meetings	Facebook group "Getting to Know Republic"	1—unless it was really something important	Every once in a while there's a musty smell when it gets cool
3. Homeowner	No	Signs around town, water bill tells us about fairs or yard sales	1	No
4. Renter	No	Facebook	If there was a virtual option, I'd be more likely to attend	Investigate how fungi can help remediate contamination
5. Homeowner	City council meetings	City of Republic newsletter and website, Facebook, Parks and Recreation website, signs	1	No
6. Homeowner	Senior Center, Republic Community Center	Facebook "Getting to Know Republic"	1	Nope, we are just happy that you're involved
7. Renter	City Hall	The Rec Center, City Utilities	1, if I were a homeowner, I would	No
8. Homeowner	City Hall monthly meeting	Notes with the monthly water bill	4	Not really
9. Homeowner	City Hall meetings every Tuesday	Facebook "Getting to Know Republic"	1	No
10. Homeowner	No	The Commonwealth, the city sends out something occasionally	3	I can't think of anything, this has been an ongoing thing
11. Local Resident	Town Hall meeting	Facebook page "Now you Know Republic Mo."	4, this really interests me	No

Interviewee	**13. Do you know of any community meetings or gathering places where groups of community members get together regularly?**	**14. What outlets are used most by people in the community to communicate local events?**	**15. Public meetings are one way to inform the community about site activities and updates. How likely is it that you would attend a public meeting? (Scale of 1-5, 5 most likely.**	**16. Do you have any other information we should know or suggestions regarding the site or site cleanup or communications?**
12.	N/A	Social media, city website	2	N/A
13. Resident Owner	Rent the meeting room at Senior Center	Newspaper, meetings, social media, mail	5	I was never told about this contamination
14. Local Resident	No	Social media	4 - if I'm not at work	N/A
15. Resident	N/A	N/A	1	Have had vapor intrusion sampling twice and received no information– I would like to know what my air quality and water quality tests revealed.

Appendix G

Environmental Glossary of Terms

General Environmental Glossary of Terms

Administrative Record (AR): A file that contains all the information used by the department and the potentially responsible party (PRP) as they make decisions on the selection of a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The file may be available for public review at or near the Superfund site at a separate location, such as a library. This location is called the information repository. A duplicate file is maintained at the main office for the department in Jefferson City.

Cleanup: An action taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term is often used broadly to describe various response actions or phases of remedial responses.

Comment Period: The time during which the public can review and comment on proposed actions, held at specific times during the Superfund cleanup process. For example, a 30-day comment period is held to allow community members to review and comment on a proposed cleanup plan before a remedy decision becomes final. A comment period may be extended upon timely written request by the public that includes the reason for the requested extension.

Community Involvement: A program to inform and involve the public in the cleanup process; to create understanding of site history, site contaminants and contaminant effects on human health and the environment; to assure public input into the decision-making process related to contaminated sites; and to collect and respond to community concerns.

Community Involvement Plan (CIP): A written plan of action that provides for interaction with the public, elected officials and environmental groups, including obtaining their input at appropriate times during the CERCLA process. A CIP must be developed and implemented for removal actions and remedial actions at all Superfund sites. The CIP is designed to ensure citizen opportunities for public involvement, to determine activities that will provide for such involvement, and to allow citizens the opportunity to learn more about the site.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law that was passed in 1980, CERCLA establishes a comprehensive, statutory framework for identifying, investigating and cleaning up releases of hazardous substances to the environment (CERCLA is commonly known as Superfund). CERCLA was modified and new authorities were established under the Superfund Amendments and Reauthorization Act (SARA) in 1986.

Feasibility Study (FS): The FS establishes the cleanup criteria, identifies the preliminary cleanup alternatives for the remedial action and supports the technical and cost analysis of the alternatives. Cleanup alternatives are evaluated using evaluation criteria which are: protection of human health and environment; compliance with applicable or relevant and appropriate requirements; long-term effectiveness and permanence; reduction of toxicity, mobility or volume through treatment; short-term effectiveness; implementability; and cost. The evaluation of the State and community acceptance criteria is completed after the receipt of public comments during the 30-day comment period for the proposed plan.

Groundwater: Fresh water found beneath the earth's surface that fills pores between materials such as sand, gravel or rock. Usually found in aquifers, groundwater occurs in sufficient quantities that it can be used to supply wells and springs for drinking water, irrigation and other purposes.

Hazardous Substance: Any substance that poses a threat to public health or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive or chemically reactive.

Human Health Risk Assessment (HHRA): Provides the qualitative and quantitative evaluation of the current and potential future risks posed to human health from exposure to site contaminants. The risk assessment evaluates both the carcinogenic and non-carcinogenic risks to human health from the site contaminants.

Hydrology: The science dealing with properties, movement, and effects of water found on the earth's surface, in the soil and rocks below, and in the atmosphere.

Information Repository: The physical location for storing site information, including the adminsistrative record. Information repositories are always kept at the department's main office in Jefferson City. The information repository can also be located in a public building that is close to the site and is convenient for local residents, such as a public library.

Leachate: A contaminated liquid created when water percolates, or travels, through waste materials in a landfill.

General Environmental Glossary of Terms cont.

Monitoring Wells: Wells that are drilled at specific locations and to specific depths, they can be located on-site or off-site at hazardous waste sites. Monitoring wells are used to sample groundwater at selected depths, determine the direction of groundwater flow and to determine the types and amounts of contaminants present.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP): The federal regulation that guides the Superfund program. The NCP was revised in September 1994.

Preliminary Assessment (PA): The process of collecting and reviewing available information about a known or suspected hazardous waste site or release status. The department uses this information to determine if the site requires further study. If further study is needed, a site inspection is performed.

Proposed Plan (PP): A public participation requirement of CERCLA, the proposed plan is a document that describes the cleanup alternatives evaluated for the site and identifies the preferred alternative and the rationale for its preference. A thirty-day comment period follows the release of the proposed plan, during which the community is given the opportunity to comment verbally or in writing during a public meeting or hearing. The proposed plan is created based on the information and data contained in the remedidal investigation/feasibility study and, following the public comment period, forms the basis for the record of decision.

Record of Decision (ROD): The public document that explains which alternative(s) or cleanup method(s), actions, tools and techniques will be used at a site, including the residual contamination levels (if any) and any restrictions on future land use where waste is left in place. The ROD is based on information and technical analysis generated during the RI/FS and consideration of public comments and community concerns.

Remedial Action (RA): The actual construction or implementation phase of the selected cleanup alternative at a Superfund site that follows remedial design.

Remedial Design (RD): The phase that follows the ROD and includes development of engineered drawings and specifications for site cleanup. This phase is before the RA and outlines what activities will be completed during the RA.

Remedial Investigation (RI): An in-depth study designed to gather data necessary to determine the nature and extent of contamination at a site.

Semi-volatile Organic Compound (SVOC): A diverse group of organic chemicals that can be found in pesticides, ingredients in cleaning agents and personal care products, and additives to vinyl flooring, furniture, clothing, cookware, food packaging and electronics. Many SVOCs are present in indoor air, where they tend to bind to interior surfaces and dust.

Volatile Organic Compound (VOC): Any organic compound that participates in atmospheric photochemical reactions except those designated as having negligible photochemical reactivity. During manufacturing, degreasers such as trichloroethylene (TCE) were once commonly used.

Terms of Environment: Glossary, Abbreviations and Acronyms

The US Environmental Protection Agency has assembled a comprehensive list of environmental terms and common abbreviations used in environmental technical reports and throughout the Superfund process. Since this is quite a long list of terms and their definitions, a link to the document has been included so you may access the list of terms conveniently online.

Click to access the "Terms of Environment: Glossary, Abbreviations and Acronyms" document.